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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/766,048 | 01/19/2001 | Frank Carr | 41601/PBH/B600 | 1888 |

7590 10/17/2005

Sterne Kessler Goldstein & Fox P L L C
1100 New York Ave N W Suite 600
Washington, DC 20005-3934

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| EXAMINER |
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KOSTAK, VICTOR R

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| ART UNIT | PAPER NUMBER |
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2614

DATE MAILED: 10/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------|--------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/766,048 | CARR ET AL. | |
| | Examiner | Art Unit | |
| | Victor R. Kostak | 2614 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10, 11, 14, 17, 18, 25-27, 30-36 and 39-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10, 11, 14, 17, 18, 25-27, 30-36 and 39-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. Applicant is informed that a different examiner is now in charge of the instant application. The current examiner regrets prolonging prosecution.

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 10, 11, 14, 17, 18, 25-27, 31-36 and 39-42 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 25, 29-31, 34 and 35 of U.S. Patent No. 6,377,315. Claim correspondences are as follows:

pending claim 10 is covered by claim 25 or 34;

pending claim 11 is covered by claim 35;

pending claim 14 is covered by claim 29;

pending claim 17 is covered by claim 34;

pending claim 18 is covered by claim 25;

pending claim 25 is covered by claim 25 or 30;

pending claim 26 is covered by claim 31;

pending claim 27 is covered by claim 30;

pending claim 31 is covered by claim 30;

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pending claim 32 is covered by claim 25;
pending claim 33 is covered by claim 25;
pending claim 34 is covered by claim 25;
pending claim 35 is covered by claim 25;
pending claim 36 is covered by claim 30;
pending claim 39 is covered by claim 25;
pending claim 40 is covered by claim 25;
pending claim 41 is covered by claim 25; and
pending claim 42 is covered by claim 25.

The subject matter recited in the pending claims is covered by the respective patented claims listed (the variable first local oscillator recited in claims 34 and 42 is met by the oscillator in corresponding patented claim 25 since the tuner typically operates at plural selectable frequencies; the various ports recited in pending claims 39-41 is met by the fact that connectivity is required to realize electrical transmission from one stage to another).

Allowing these claims would result in an unjustified time-wise extension of the monopoly granted for the invention defined by the respective corresponding claims (listed above) of the US Patent.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

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international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Amended claims 10, 11, 17, 18, 25-27, 30-36 and 39-42 are also rejected under 35

U.S.C. 102(e) as being anticipated by Tomasz.

The system and method of Tomasz (noting particularly Fig. 3) includes various tuning components disposed on a common IC chip 216 that inherently includes a substrate. A first up converter 222 that includes mixer 208 (with VCO1) passes its output to a differential filter 210 which is external to the common chip (as shown). Filter 210 outputs the band of the up-converted signal. A down converter 240 comprises a second mixer as shown (with VCO2), the second mixer being a differential I/Q mixer (the outputs being out of phase to each other by 90°). VCO2 corresponds to the claimed first polyphase circuit as it provides the oscillator signals for the down converter. The second polyphase circuit corresponds to the associated filters 254 downstream the down converter and which performs further image rejection (col. 5 line 66 – col. 6 line 1), thereby meeting claims 10, 25 and 32.

As for claim 11, differential filter can be a SAW filter (col. 3 lines 11-14).

As for claims 17, both mixers are differential mixers (as shown).

Regarding claim 26, the operating band accommodates plural television channels (e.g. col. 1 lines 6-9).

As for claims 27 and 31, filter pair 254 limits the channels bands by rejecting adjacent carriers (noting again col. 5 line 66 – col. 6 line 1).

As for claim 30, an AGC circuit is also incorporated (noting stage 250).

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As for claims 33 and 34, VCO1 is local and is disposed on chip 216, and provides oscillation to the up convertor 222 at various selectable frequencies to perform channel selection (col. 6 lines 43-49).

Considering claims 35 and 41, VCO2 is also disposed on chip 216 and provides oscillation to down convertor 240.

As for claims 39 and 40, electrical connectivity is inherent for the system to operate in concert, and differential connections are used (as shown), and accommodate quadrature signals are further processed.

As for claim 42, the first VCO is variable (as noted previously) and feeds differential filter 210, as shown.

4. Claim 14 is now rejected under 35 U.S.C. 103(a) as being unpatentable over Tomasz in view of Birleson et al. (of record).

Although Tomasz does not specify which material that constitutes substrate chip 216, it would have been obvious to use any suitable type that can accommodate the plural tuner components, such as the CMO type disclosed by Birleson.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor R. Kostak whose telephone number is (571) 272-7348.

The examiner can normally be reached on Monday - Friday from 6:30am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
P.O. Box 1450
Alexandria, Virginia 22313-1450

Or faxed to:

(571) 273-8300

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Customer Service Office whose telephone number is (703) 308-HELP.

Victor R. Kostak

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Primary Examiner
Art Unit 2614

VRK

A handwritten signature in black ink, appearing to be "h. h. t." or similar, written in a cursive style.